WHAT IS CLAIMED IS:

1. A gas distributor, which comprises:

(a) a gas inlet;

(b) a gas outlet head in communication with the gas inlet for receiving a flow of gas from the gas inlet and having a peripheral surface;

(c) a plurality of gas outlets spaced along the peripheral surface, the gas flow exiting as a gas stream from each gas outlet;

(d) a plurality of gas deflectors, each deflector being proximate to one of the gas outlets and at least initially directing the gas stream exiting each gas outlet in at least a generally centripetal path.

2. The distributor of claim 1 wherein each deflector is an angular deflector comprising an aft component having a generally forward deflecting surface and an upper component having a generally downward deflecting surface such that the gas stream exiting each gas outlet is directed by each deflector into a curved generally centripetal, downward path.

3. The distributor of claim 2 wherein each deflector has an open generally trapezoidal shape.

4. The distributor of claim 3 wherein the aft component has a generally triangular shape and wherein the upper component has a generally triangular shape and wherein the forward deflecting surface and the downward deflecting surface intersect at an edge.

5. The distributor of claim 1 wherein the gas outlet head is generally cylindrical and wherein the peripheral surface is generally circular.

6. The distributor of claim 5 wherein the gas outlets are in the form of holes spaced along the peripheral surface and wherein the number of holes is at least 4.

7. The distributor of claim 6 wherein the number of holes is in the range of from 4 to 20.

8. The distributor of claim 7 wherein the number of holes is in the range from 6 to 12.

9. An apparatus for vapor coating of articles with a metallic coating, which comprises:

(1) a coating container having a base, a top spaced from the base, and a side wall connecting the top and the base;

(2) a gas distributor comprising:

(a) a gas inlet;

(b) a gas outlet head in communication with the gas inlet for receiving a flow of gas from the gas inlet and having a peripheral surface;

(c) a plurality of gas outlets spaced along the peripheral surface, the gas flow exiting as a gas stream from each gas outlet;

(d) a plurality of gas deflectors, each deflector being proximate to one of the gas outlets and at least initially directing the gas stream exiting the gas outlet in at least a generally centripetal path

(3) at least one holder for each article to be coated positioned within the coating container and below the gas outlet head of the gas distributor;

(4) at least one holder for a source of the metallic coating positioned within the coating container and below the gas outlet head of the gas distributor.

10. The apparatus of claim 9 wherein the container and the side wall are generally cylindrical.

11. The apparatus of claim 10 wherein each deflector is an angular deflector comprising an aft component having a generally forward deflecting surface and an upper component having a generally downward deflecting surface such that the gas stream exiting each gas outlet is directed by each deflector into a curved generally centripetal, downward path.

12. The apparatus of claim 11 wherein each deflector has an open generally trapezoidal shape.

13. The apparatus of claim 12 wherein the aft component has a generally triangular shape and wherein the upper component has a generally triangular shape and wherein the forward deflecting surface and the downward deflecting surface intersect at an edge.

14. The apparatus of claim 13 wherein the gas outlet head is generally cylindrical and wherein the peripheral surface is generally circular.

15. The apparatus of claim 13 wherein the gas outlets are in the form of holes spaced along the peripheral surface and wherein the number of holes is in the range from 4 to 20.

16. A method for introducing an inert carrier gas into a coating container for vapor coating of articles with a metallic coating, the container having a base, a top spaced from the base, and a side wall connecting the top and the base, the method comprising the step of introducing the carrier gas as a plurality of carrier gas streams proximate the top of the coating container, each carrier gas stream flowing at least initially in at least a generally centripetal path.

17. The method of claim 16 wherein each carrier gas stream is flowing at least initially in a curved generally centripetal, downward path.

18. The method of claim 17 wherein the carrier gas is introduced at a gas flow rate of at least about 15 ft^3/hour (about 425 $liters^3$/hour).

19. The method of claim 18 wherein the gas flow rate is in the range of from about 15 to about 120 ft^3/hour (from about 425 to about 3,398 $liters^3$/hour).

20. The method of claim 19 wherein the gas flow rate is in the range of from about 40 to about 70 ft^3/hour (from about 1133 to about 1982 $liters^3$/hour).

21. The method of claim 18 wherein the carrier gas is argon.

22. A method for coating articles with a metallic coating in a vapor coating container having a base, a top spaced from the base, and a side wall connecting the top and the base, the base, top and side wall defining a coating chamber, the method comprising the steps of:

(a) loading the coating chamber of the container with articles to be coated;

(b) loading the coating chamber of the container with a source of a metallic coating;

(c) introducing an inert carrier gas as a plurality of inert carrier gas streams proximate the top of the loaded coating container, each carrier gas stream flowing at least initially in a curved generally centripetal, downward path to provide an inert gas atmosphere in the coating chamber of the loaded container;

(d) after the inert gas atmosphere is provided in the coating chamber of the loaded container, heating the loaded container to a temperature sufficient to form a metallic coating gas from the metallic coating source;

(e) continuing the flow of the carrier gas into the coating chamber of the loaded container to move the metallic coating gas within the coating chamber of the loaded container so as to deposit a coating on the articles.

23. The method of claim 22 wherein the articles are airfoil turbine blades, wherein the metallic coating source is an aluminum source and wherein the metallic coating gas is an aluminide-bearing gas.

24. The method of claim 23 which comprises the further step of loading the coating chamber of the container with a halide activator prior to step (d) and wherein the halide activator forms a reactive halide gas after heating during step (d) that reacts with the aluminum source to form the aluminide-bearing gas.

25. The method of claim 23 wherein the halide activator is selected from the group consisting of aluminum chloride, aluminum fluoride, ammonium fluoride and mixtures thereof.

26. The method of claim 24 wherein the carrier gas is introduced during step (e) into the coating chamber of the loaded container at a gas flow rate of at least about 15 ft^3/hour (about 425 $liters^3$/hour).

27. The method of claim 26 wherein the gas flow rate during step (e) is in the range of from about 15 to about 120 ft^3/hour (from about 425 to about 3,398 $liters^3$/hour).

28. The method of claim 27 wherein the gas flow rate during step (e) is in the range of from about 40 to about 70 ft^3/hour (from about 1133 to about 1982 $liters^3$/hour).

29. The method of claim 26 wherein the carrier gas is argon.

30. The method of claim 26 wherein the loaded container is heated during step (c) to a temperature of at least about 1000°F (about 538°C).

31. The method of claim 30 wherein the loaded container is heated during step (c) to a temperature in the range from about 1000° to about 2200°F (from about 538° to about 1204°C)

32. The method of claim 31 wherein the loaded container is heated during step (c) to a temperature in the range of from about 1900° to about 2000°F (from about 1038° to about 1093°C).